

CLAIMS

1. A method for manufacturing a capacitor element for a solid electrolytic capacitor comprising the steps of:
 - 5 forming a porous anode chip body by solidly molding a powder of a valve-acting metal, and then sintering the same; adhesively attaching one end surface of said anode chip body to the surface of a metal plate with an electrically conductive adhesive, so that the anode chip body can be
10 peeled off from the metal plate; successively forming a dielectric film, a solid electrolyte layer, and a cathode-side electrode film, in this order, on the anode chip body adhesively attached to said metal plate, and
15 separating said anode chip body from said metal plate.
2. The method for manufacturing a capacitor element for a solid electrolytic capacitor according to claim 1, further comprising a step of:
 - 20 forming a coating film of a water-repellent synthetic resin on the surface of said metal plate so as to seal the one end surface of said anode chip body with said coating film, between the steps of adhesively attaching the one end surface of said anode chip body to the surface of the metal
25 plate; and forming the dielectric film, the solid electrolyte layer, and the cathode-side electrode film on the anode chip body.

3. A method for manufacturing a solid electrolytic capacitor comprising manufacturing a capacitor element via the steps of:

forming a porous anode chip body by solidly molding a
5 powder of a valve-acting metal, and then sintering the same;

adhesively attaching one end surface of said anode chip body to the surface of a metal plate with an electrically conductive adhesive, so that the anode chip body can be peeled off from the metal plate;

10 successively forming a dielectric film, a solid electrolyte layer, and a cathode-side electrode film, in this order, on the anode chip body adhesively attached to said metal plate;

separating said anode chip body from said metal plate,
15 the method further comprising the steps of:

providing an anode-side terminal on one end surface of the anode chip body in said capacitor element and providing a cathode-side terminal on the cathode-side electrode film of the anode chip body; and

20 packaging the entire said capacitor element with a synthetic resin.

4. A solid electrolytic capacitor, wherein

a capacitor element comprises a porous anode chip body
25 obtained by solidly molding a powder of a valve-acting metal and then sintering the same, a dielectric film formed on the surface of the anode chip body other than the one end surface thereof, a solid electrolyte layer formed on top of

said dielectric film other than said one end surface, and a cathode-side electrode film formed on top of said solid electrolyte layer other than said one end surface;

an anode-side terminal is provided on the metal powder
5 exposed on the one end surface of said anode chip body in the capacitor element; and

a cathode-side terminal is provided on the cathode-side electrode film in said capacitor element.

10 5. A solid electrolytic capacitor, wherein

a capacitor element comprises a porous anode chip body obtained by solidly molding a powder of a valve-acting metal and then sintering the same, a dielectric film formed on the surface of the anode chip body other than the one end
15 surface thereof, a solid electrolyte layer formed on top of said dielectric film other than said one end surface, and a cathode-side electrode film formed on top of said solid electrolyte layer other than said one end surface;

an anode-side metal film is provided on the metal
20 powder exposed on the one end surface of said anode chip body in the capacitor element; and

a cathode-side metal film is provided on the cathode-side electrode film in said capacitor element.